Protection for Threatened and Impaired Watersheds, 1999

Proposed Rule Language
[from July 7, 1999]

Amend § 895 Abbreviations Applicable Throughout Chapter.

The following three abbreviations shall be added to this section in alphabetic order.

CDF California Department of Forestry and Fire Protection

DFG California Department of Fish and Game

RWQCB Regional Water Quality Control Board

Note: Authority cited: Sections 4551, 4551.5 and 21082, Public Resources Code. Reference: Sections 4511, 4512, 4513, 4521.3, 4522, 4522.5, 4523-4525, 4525.3, 4525.5, 4525.7, 4526, 4526.5, 4527, 4527.5, 4528, 4551, 4551.5, 4552, 4582 and 21080.5, Public Resources Code.

Amend § 895.1. Definitions.

The following six definitions shall be added to this section in alphabetic order.

"Bankfull stage" means the stage that occurs when discharge fills the entire channel cross section without significant inundation of the adjacent floodplain, and has a recurrence interval of 1.5 to 2.0 years.

"Channel zone" means that area that includes a watercourse's bankfull channel and floodplain, encompassing the area between the watercourse transition lines.

"Saturated soil conditions" means ~~1) the wetness of the soil within a yarding area such that soil strength is exceeded and displacement from timber operations will occur. It is evidenced by soil moisture conditions that result in: a) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance, or b) inadequate traction without blading wet soil or, c) soil displacement in amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I or II watercourse or lake. Soils frozen to a depth sufficient to support equipment weight are excluded. 2) soil moisture conditions on roads and landings, in excess of that which occurs from normal road watering or light rainfall that will result in the significant loss of surface material from the road and landings in amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I or II watercourse or lake~~ that site conditions are sufficiently wet that timber operations may displace soils in yarding or mechanical site preparation areas or road and landing surface materials in amounts sufficient to cause a turbidity increase in downstream Class I, II, III, or IV waters that is visible or would violate applicable water quality requirements. Soils or road and landing surfaces that are hard frozen are excluded from this definition. In yarding and site preparation areas, this condition is evidenced by spinning or churning of equipment wheels or tracks in excess of normal performance, the need to blade soils to provide adequate traction, or creation of ruts greater than would be normal following a light rainfall. On logging roads and landing surfaces, this condition is evidenced by pumping of

road surface materials by traffic, or creation of ruts greater than would be created by traffic following normal road watering.

"Stable operating surface" means that throughout the period of use, the operating surface of a logging road or landing does not either generate sediment or become rutted or deformed to the extent that water can be channeled along the surface for more than 50 feet.

"Watercourse or Lake Transition Line" means that line ~~closest to the watercourse or lake where riparian vegetation is permanently established~~ that is the outer boundary of a watercourse's floodplain as defined by the following:

(1) the upper limit of sand deposition; or

(2) evidence of recent channel migration and/or flood debris.

The first line of permanent woody vegetation must not be used to determine this transition line.

"Watersheds with threatened or impaired values" means any planning watershed:

(1) that contains or drains to a water body that is listed pursuant to Section 303(d) of the Federal Clean Water Act as having beneficial uses of water that are impaired by factors that may be affected by timber operations, including, but not limited to, sediment and temperature, except any portion of the planning watershed that contains or drains directly to a portion of the water body that has been specifically excluded from the Section 303(d) list,

(2) that contains a water body that is the subject of a Total Maximum Daily Load that has been adopted to address factors that may be affected by timber operations, or

(3) where populations of anadromous salmonids or populations of other aquatic or riparian-dependent species that are listed as threatened or endangered under the State or Federal Endangered Species Acts and are currently supported or can feasibly be restored, including salmonids listed as candidate species.

Note: Authority cited: Sections 4551, 4551.5, 4553, 4561, 4561.5, 4561.6, 4562, 4562.5, 4562.7 and 454591.1, Public Resources Code. Reference: Sections 4512, 4513, 4526, 4551, 4551.5, 4561, 4561.6, 4562, 4562.5, 4562.7, 4583.2, 4591.1, 21001(f), 21080.5, 21083.2 and 21084.1, Public Resources Code; CEQA Guidelines Appendix K (printed following Section 15387 of Title 14 Cal.Code of Regulations), and *Laupheimer v. State* (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

Amend §§ 916, 936, and 956 Intent of Watercourse and Lake Protection.

The purpose of this article is to ~~insure~~ assure that ~~the protection of~~ the beneficial uses ~~that are derived from the physical form, water quality, and biological characteristics~~ of watercourses and lakes, aquatic and riparian species, and the beneficial functions of riparian zones are fully protected from site-specific and cumulative impacts associated with timber operations. It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing equal consideration for the beneficial uses of water. Further, it is the intent of the Board to clarify and assign responsibility~~, to recognize~~ for recognition of potential and

existing impacts of timber operations on ~~the beneficial uses of water,~~ watercourses and lakes, aquatic and riparian-dependant species, and the beneficial functions of riparian zones and to ensure adoption of feasible measures to ~~prevent water pollution related to timber harvesting~~ effectively achieve compliance with this article. All provisions of this article shall be applied in a manner which complies with the following:

(a) During and following timber operations, the beneficial uses of water, aquatic and riparian-dependent species, and the functions of riparian zones, soils and vegetation, shall be maintained where they are in good condition, effectively protected where they are threatened, and insofar as feasible, effectively restored where they are impaired.

(b) Protection of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not do either of the following during timber operations:

(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial riparian zone functions, or the quality and beneficial uses of water;

(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial riparian zone functions, or the quality and beneficial uses of water.

(c) Protecting and restoring aquatic and riparian dependant species, the beneficial functions of riparian zones and the quality and beneficial uses of water shall be the primary management objective within any prescribed WLPZ, or within any planning watershed with threatened or impaired values.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 4512, 4513, 4551.5, 4552, 4562.5, 4562.7, 21001(b), (f), 21002 and 21002.1, Public Resources Code; Sections 100, 1243, 1243.5, 13001, 13001(f), 13146 and 13147, Water Code; and 33 USC Section 1288(b)(2)(F).

Amend §§ 916.2, 936.2, and 956.2 Protection of the Beneficial Uses of Water and Riparian Functions.

(a) The measures used to protect ~~the beneficial uses of water for~~ each watercourse and lake in a logging area shall be determined by the presence and condition of the following values:

(1) The existing, potential, and restorable quality and beneficial uses of water as specified by the applicable water quality control plan and as further identified and refined during preparation and review of the required plan.

(2) The restorable uses of water for fisheries as identified by the ~~Department of Fish and Game~~ DFG or as further identified and refined during preparation and review of the required plan.

(3) Riparian habitat that provides for t~~T~~he biological needs of ~~the fish and wildlife~~ aquatic and riparian-dependant species ~~provided by the riparian habitat~~ as specified in 14 CCR 916.4(b) [936.4(b), 956.4(b)].

(4) Sensitive ~~near stream~~ conditions near watercourses and lakes as specified in 14 CCR 916.4(a) [936.4(a), 956.4(a)].

These values shall be fully protected from potentially significant adverse impacts from any timber operation and restored to good condition, where needed, through a combination of the rules and plan-specific mitigation.

(b) The State's waters are grouped into four classes based on key beneficial uses. These classifications shall be used to determine the appropriate minimum protection measures to be applied ~~to the State's waters~~ during the conduct of timber operations. The basis for classification (characteristics and key beneficial uses) are set forth in 14 CCR 916.5 [936.5, 956.5], Table 1 and the range of minimum protective measures applicable to each class are contained in ~~Sections~~ 14 CCR 916.3 [936.3, 956.3], 916.4~~(c)~~ [936.4, 956.4], and 916.5 [936.5, 956.5].

(c) When the protective measures contained in 14 CCR 916.5 [936.5, 956.5] are not adequate to provide protection to beneficial uses, feasible protective measures shall be developed by the RPF or proposed by the Director under the provisions of 14 CCR 916.6 [936.6, 956.6], Alternative Watercourse and Lake Protection, and incorporated in the THP when approved by the Director.

(d) If it would not be feasible to implement these minimum protective measures, then alternative practices may be used pursuant to 14 CCR 916.6 [936.6, 956.6].

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b)(2)(F).

~~**§§ 916.9 [936.9, 956.9] Exclusion of Material from Streams and Lakes.**~~

Adopt §§ 916.9, 936.9, 956.9 Protection and Restoration in Watersheds with Threatened or Impaired Values.

In addition to all other district Forest Practice Rules, the following requirements shall apply in any planning watershed with threatened or impaired values:

(a) Every timber operation shall be planned and conducted to prevent any deleterious interference with natural recovery rates and process for the factors that primarily limit the condition of the values set forth in 14 CCR 916.2 [936.2, 956.2](a) (e.g., no net sediment load increase where sediment is a primary limiting factor; no net thermal load increase where water temperature is a primary limiting factor; no net loss of instream large woody debris or recruitment potential where lack of this value is a primary limiting factor; no substantial increase in peak flows or large flood frequency where peak flows or large flood frequency are primary limiting factors). To comply with this objective, every timber operation shall be planned and conducted to meet the following goals:

(1) Result in no net sediment load increase to a watercourse system or lake.

(2) Result in no decrease in the stability of a watercourse channel or of a watercourse or lake bank.

(3) Result in no blockage of any aquatic migratory routes for anadromous salmonids or listed species.

(4) Result in no stream flow reductions during critical low water periods.

(5) Protect, maintain, and restore trees (especially conifers), snags, or downed logs that currently, or may in the foreseeable future, provide large woody debris recruitment needed for instream habitat structure and fluvial geomorphic functions.

(6) Protect, maintain, and restore the quality and quantity of vegetative canopy needed to: (i) provide shade to the watercourse or lake, (ii) minimize daily and seasonal temperature fluctuations, (iii) maintain daily and seasonal water temperatures within the preferred range for anadromous salmonids or listed species where they are present or could be restored, and (iv) provide hiding cover and a food base where needed.

(7) Result in no substantial increases in peak flows or large flood frequency.

(b) Adverse cumulative watershed effects on beneficial uses of water and/or the populations and habitat of anadromous salmonids or listed species shall be deemed to exist, and the plan shall set forth measures to effectively reduce such effects.

(c) Any timber operation or silvicultural prescription within 200 feet of any Class I waters or within the standard or expanded width of any Class II WLPZ shall have protection, maintenance, or restoration of the beneficial uses of water or the populations and habitat of anadromous salmonids or listed aquatic or riparian-dependent species as its primary objectives; harvesting of wood products shall be secondary to those objectives.

(d) Nonstandard practices (i.e., waivers, exceptions, in-lieu practices, and alternative practices) shall comply with the goals set forth in subsection (a) above as well as with the other requirements set forth in the rules.

(e) The minimum WLPZ width for Class I waters shall be 150 feet from the watercourse or lake transition line.

(f) For Class I waters, any required plan involving a timber operation within the WLPZ shall contain the following information:

(1) A clear and enforceable specification of how any disturbance or log or tree cutting and removal within the Class I WLPZ shall be carried out to conform with 14 CCR 916.2 [936.2, 956.2](a) and 916.9 [936.9, 956.9](a).

(2) A specific and enforceable long term monitoring program to determine the effectiveness of the prescribed practices as implemented during the timber operation, including the reporting of the monitoring results to CDF and review team agencies.

(3) A description of all existing permanent crossings of Class I waters by logging roads and clear specification regarding how these crossings are to be modified, used, and treated to minimize risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages.

(4) Clear and enforceable specifications for construction and operation of any new crossing of Class I waters to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage, or other potential impairment of beneficial uses of water.

(g) Where an inner gorge is present above a Class I WLPZ and slopes are greater than 55%, a special management zone shall be established that requires the use of selection harvesting. This zone shall extend upslope to the first major break-in-slope, or 300 feet as measured from the watercourse or lake transition line, which ever is less. When evenaged management is proposed above a special management zone, but within an inner gorge and on slopes that range from 55% to 65%; the proposed operations shall be reviewed

by a Certified Engineering Geologist (CEG) prior to plan approval. All operations on slopes exceeding 65% within an inner gorge shall be reviewed by a CEG prior to plan approval, regardless of whether they are proposed within a WLPZ or outside of a WLPZ.

(h) All watercourse crossings will be constructed to accommodate the estimated 100-year flood flow, including debris and sediment loads.

(i) The following shall apply to all Class I watercourse crossings:

(1) Except for culverts, all new and replaced Class I crossings shall have a natural bottom.

(2) Any new permanent culverts installed within Class I watercourses shall allow upstream or downstream passage of fish or listed aquatic species during any life stage and for the natural movement of bedload to form a stable bed inside the culvert and shall meet the following specifications: (i) The culvert shall be at least equal to the average bankfull channel bed width at the elevation the culvert intersects the bed; (ii) the culvert shall be installed at a flat gradient; (iii) the downstream invert shall be countersunk a minimum of 20% of the culvert diameter or rise; (iv) upstream headcut potential shall be prevented; (v) the culvert shall accommodate the 100 year flood event, including debris and sediment loads.

Any alternative to these specifications requires an analysis and specifications by a Professional Engineer licensed in California demonstrating conformance with the intent of this section and subsection.

(j)Harvesting is prohibited within the channel zone.

(k) Within a WLPZ for Class I waters, at least 85 percent overstory canopy shall be retained within 75 feet of the watercourse or lake transition line, and at least 65 percent overstory canopy within the remainder of the

WLPZ. The overstory canopy must be composed of at least 25% overstory conifer canopy post-harvest. Where these minimum percentages do not currently exist within the Class I WLPZ, no timber harvesting shall occur within the Class I WLPZ.

(l) The minimum WLPZ width for Class II waters shall be 100 feet from the watercourse or lake transition line..

(m) Within a WLPZ for Class II waters, at least 85 percent overstory canopy shall be retained within 30 feet of the watercourse or lake transition line, and at least 65 percent overstory canopy within the remainder of the WLPZ. The overstory canopy must be composed of at least 25% overstory conifer canopy post-harvest. Where these minimum percentages do not currently exist within the Class II WLPZ, no timber harvesting shall occur within the Class II WLPZ.

(n) A 30 to 50 foot wide ELZ or EEZ is required for Class III waters. All hardwoods shall be retained within the ELZ or EEZ.

(o) Recruitment of large woody debris for aquatic habitat in Class I waters shall be ensured by retaining within the WLPZ at least ten conifers per 330 feet of stream channel length. The retained conifers shall be: (i) within 50 feet of the watercourse or lake transition line (ii) among the most likely to fall into the water, (iii) from the upper 20% of the dbh distribution of the preharvest stand in the WLPZ, (iv) clearly and permanently marked, and (v) retained in future harvests unless replaced by a tree that is of equal or greater size, and that is either more likely to contribute to recruitment, or is more rot resistant.

(p) From October 15 to May 1,(i) no timber operations shall take place unless the approved plan incorporates a complete winter period operating plan

pursuant to 14 CCR 914.7 [934.7, 965.7] (a), (ii) no skid trails shall be constructed, reconstructed, or used on slopes that are over 40 percent and within 200 feet of a Class I, II, or III watercourse, as measured from the watercourse or lake transition line, and (iii) operation of trucks and heavy equipment on roads and landings shall be limited to those with a permanent stable operating surface throughout the period of use.

(q) Construction or reconstruction of logging roads, tractor roads, or landings shall not take place during the winter period. Use of logging roads, tractor roads, or landings shall not take place where saturated soil conditions exist, where a stable logging road or landing operating surface does not exist, or when visibly turbid water from the road, landing, or skid trail surface or inside ditch may reach a watercourse or lake. Grading to obtain a dryer running surface more than one time before reincorporation of any resulting berms back into the road surface is prohibited.

(r) All tractor roads shall have drainage and/or drainage collection and storage facilities installed prior to the start of any rain which causes overland flow across or along the disturbed surface or any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood watch.

(s) Within the WLPZ, EEZ or ELZ, treatments to stabilize soils, minimize soil erosion, and prevent the discharge of sediment into waters in amounts deleterious to aquatic species or the quality and beneficial uses of water, or that threaten to violate applicable water quality requirements, shall be applied in accordance with the following standards:

(1) The following requirements shall apply to all such treatments.

i. They shall be described in the required plan.

ii. For areas disturbed from May 1 through October 15, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or by October 15th, whichever is earlier.

iii. For areas disturbed from October 16 through April 30, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.

(2) The traveled surface of logging roads shall be treated to prevent generation of sediment and concentration of runoff at anytime, and treated with rock or other suitable material to provide a stable operating surface during periods of use.

(3) The treatment for other disturbed areas, including: (i) areas exceeding 100 contiguous square feet where timber operations have exposed bare soil, (ii) approaches to tractor road watercourse crossings between the drainage facilities closest to the crossing, (iii) road cut banks and fills, and (iv) any other area of disturbed soil that threatens to discharge sediment into waters in amounts deleterious to the quality and beneficial uses of water, may include, but need not be limited to, mulching, rip-rapping, grass seeding, or chemical soil stabilizers. Where straw, mulch, or slash is used, the minimum coverage shall be 90%, and any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of timber operations.

(4) Where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from timber operations, the ground shall be treated by measures including, but not limited to, seeding, mulching, or

replanting, in order to retain and improve its natural ability to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes.

(t) As part of the required plan, the RPF shall identify active erosion sites linked to past management activities in the logging area, shall assess them to determine which sites pose significant risks to the beneficial uses of water and which can be feasibly remedied, and shall submit a remedial plan and time schedule to complete all remedial action for all sites that can be feasibly remediated.

(u) The erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned in accordance with 14 CCR 923.8 shall be three years.

(v) The required plan shall fully describe: (i) the type and location of each measure needed to fully offset sediment or thermal loading or cumulative watershed effects from timber operations, and (ii) the person(s) responsible for the implementation of each measure, if other than the timber operator.

In proposing, reviewing, and approving such measures, preference shall be given to the following: (i) measures that are both onsite (i.e., on or near the plan area) and in-kind (i.e., erosion control measures where sediment is the problem), and (ii) sites that are located to maximize the benefits to the impacted portion of a watercourse or lake. Out-of-kind measures (i.e., improving shade where sediment is the problem) shall not be approved as meeting the requirements of this subsection.

(w) No salvage logging is allowed in a WLPZ without: (i) written concurrence from DFG or an approved HCP with NMFS and (ii) an SYP or approved

plan that contains a section that sets forth objectives, goals, and measurable results for streamside salvage operations.

(x) Where these measures would not achieve the goals set forth in subsection (a), other measures that would effectively achieve such conformance may be approved in accordance with 14 CCR, 916.6 [936.6, 956.6].

(y) Site preparation activities that result in soil disturbance within or cause sediment movement into the channel of watercourses shall not be conducted. Prior to any burning, burning prescriptions shall be designed to prevent loss of large woody debris in watercourses, and vegetation and duff within a WLPZ, ELZ or EEZ. When burning prescriptions are proposed, the measures or burning restrictions which are intended to accomplish this goal shall be stated in the required plan and the burning permit. This information shall be provided in addition to the information required under 14 CCR 915.4 [935.4, 954.4].

(z) Water drafting for timber operations shall conform with the following standards:

(1) Drafting is prohibited if surface flow: (i) is less than two cubic feet per second or (ii) would be reduced by more than 20% below the drafting or diversion point.

(2) Water holes shall not be constructed in watercourses or lakes.

(3) Intakes shall be screened in Class I and Class II waters.

(4) Approaches to drafting locations within a WLPZ shall be surfaced with rock or other suitable material to avoid generation of sediment.

(aa) No timber operations are allowed in the WLPZ, EEZ, or ELZ under emergency notices or exemption notices.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b)(2)(F).

Adopt §§ 923.9 [943.9, 963.9] Road and Landings in Watersheds with Threatened or Impaired Values.

In addition to all other district Forest Practice Rules, the following requirements shall apply in any planning watershed with threatened or impaired values:

(a) Where road construction or reconstruction is proposed, the required plan shall state the locations of and specifications for road or landing abandonment or other mitigation measures to achieve no net increase in road density within the ownership within the watershed.

(b) New and reconstructed logging roads shall be no wider than 14 feet for tractor yarding areas and 16 feet where cable yarders are employed. They shall be outsloped and drained with water breaks. Where the road grade is inclined at 7 percent or less, rolling dips shall be used.

(c) The following shall apply on slopes greater than 50%:

(1) Specific provisions of construction shall be identified and described for new roads.

(2) Where cutbank stability is not an issue, roads may be constructed as a full-benched cut (no fill). Spoils shall be disposed of in stable areas with less than 30 percent slope and outside of any WLPZ, EEZ, or ELZ.

(3) Alternatively, roads may be built with balanced cuts and fills if properly engineered with fills reinforcement or retainment, or fills may be removed with the slopes recontoured prior to the winter period.

(d) In addition to the provisions listed under 14 CCR 923.1(e) [943.1(e), 963.1(e)], all logging roads with a grade of 20% or greater that extends 500 continuous feet or more shall be surfaced with rock.

(e) Where situations exist that elevate risks to the factors set forth in 14 CCR 916.2(b), [936.2(b), 956.2(b)] (e.g., road networks are remote, the landscape is unstable, water conveyance features historically have a high failure rate, culvert fills are large) drainage structures and erosion control features shall be oversized, self-maintaining, or reinforced, or they shall be removed before the completion of the timber operation. The method of analysis used to design crossing protection shall be included in the required plan.

Note: Authority cited: Sections 4551, 4551.5, 4553, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551, 4551.5, 4562.5, 4562.7, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f) Water Code; Sections 1600 and 5650(c), Fish and Game Code; and 33 USC Section 1288(b); *Natural Resources Defense Council, Inc. v. Arcata Natl. Corp.* (1976) 59 Cal.App. 3d 959, 131 Cal.Rptr. 172.

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